



EQ-1 Wireless Rectal Scanner

USERS' GUIDER



Advanced Farm Systems

Philip Schoeffel Pty Ltd

ABN: 132 624 705

17 Spaldings Rd. Congarinni North

NSW 2447

Ph. 0400 403 883

www.advancedfarmsystems.com.au

Email. advancedfarmsystems@gmail.com

Section 1 Introduction

EQ-1 Wireless Rectal Ultra Sound Linear Scanner is the new generation Of Ultrasound instruments for Breeders and Veterinarians with the Outstanding feature of it being Wireless

Different from traditional Ultra Sound Scanners with a cable connecting the probe to a console, the EQ-1 Scanner is integrated with ultra sound image processing, power management and a wireless signal provider to link to your own Android Tablet. No Internet connection is required after you have downloaded the free App to your mobile devise. It's all done through the EQ-1 Wireless Connection.

Once the probe is connected wirelessly through WiFi to your Android Tablet you no longer have to drag cables between the Ultrasound Probe and the Console in and out of the cattle crush. This represents the biggest breakthrough that we have seen in Cattle Ultrasound Pregnancy Scanning since we started in the Livestock Pregnancy Scanning business in 1991. Being a Linear Scanner the images are crystal clear and Pregnancy detection is simplified.

This manual is intended to provide a thorough overview of the EQ-1 Ultra Sound Scanner and should be carefully read before operating the devise.

Thank you for your trust in us to provide the best method of Pregnancy Scanning Cattle.



Figure 1.1 EQ-1 Wireless Rectal Scanner System

1.1. Specifications

Display:	Android mobile device
Probe:	6.5MHz/8MHz Linear array
Depth:	40 – 100mm
Scanner Mode:	Linear
Array Transducer Length:	60mm
Display Mode:	B/BM
Gray Scale:	256 levels
Battery last:	7.5hours
Size:	80mm x 5mm x 3mm
Weight:	0.8 Kg

Section 2 Getting Started

FOR YOUR PROTECTION, please read these safety instructions completely before applying power to, or operating the system.

2.1. Unpacking

The EQ-1 Scanner is carefully packed to prevent damage during shipment. Before unpacking, please note any visible damage to the outside of the shipping containers.

Items should be checked in order to ensure that all ordered items have been received. The following table lists the items which should be received with each particular system.

Table 2-1 Items List for EQ-1 Wireless Rectal Scanner

ITEMS	INCLUDED
EQ-1 Wireless Rectal Probe	√
USB Cable for Charging	√
Users' Guide	√
waterproof bag for tablet	Option

Each item should be examined for any noticeable defects or damage that may have occurred during shipment although it is packed carefully. If any defect or damage exists, please contact Advanced Farm Systems.

2.2. Installing APP

If the EQUUS App is not installed in your device, Scan the QR Code below to install the app. OR copy below link you're your BROWSER
https://play.google.com/store/apps/details?id=com.sonoptek.smartvus3.eq&hl=en_US&gl=US



EQUUS

2.3. Starting Probe



Figure 2-1 EQ-1 Wireless Rectal Probe

- ①---Power On/Off, Freeze/Live
- ② Battery Indicator

The Battery Capacity Indicator on the probe is not visible before the probe is turned on.

Press the Power On button to turn on the probe. The Battery Capacity Indicator will show by blue lights to indicate the capacity of the battery. The four grids of the indicator imply the battery capacity. (Probe charging will be described in section 4.)

The probe can be turned off by hold down the button for seconds. When the probe is off, the indicators will be turned off.

2.4. Wireless Connection

- Turn on the Probe by pressing the start Icon on the Probe.
- **A blue light will appear.**
- To the right of the start button blue lights will appear to indicate level of battery charge in the Probe.
- **All 4 lights ON** will mean the Probe is fully charged.
- To connect the Probe to the Tablet the Probe will need to be turned **ON**
- Turn on the Tablet.
- Tap on the **Settings button**
- Tap WiFi
- Under Network or WLAN **EQC** plus probe serial # Should Appear.
- Tap on it
- **It will now ask you for Password. The Password is the Serial Number on your Probe.**
- **Enter the Serial Number in ALL LOWER CASE**
- Once connected **Open the EQ App on your Tablet**
- **TO ENSURE YOU ARE CONNECTED to WIFI**
- **The Probe's EQ-1 GVCAMA005 serial number should now appear in BLUE at the top left hand side of the EQUUS APP screen. If it DOESN'T appear you are not connected. GO BACK AND RECONNECT.**
- **ONCE CONNECTED**
- Press the **SNOW Icon** on the left hand side of the screen.
- The word **LIVE** should now appear at the bottom left of the screen.
- **This means you are connected and ready to start scanning.**
- **HAPPY DAYS!**

Section 3 APP Operations

The manual is instructed on an Andorid tablet based, at this stage Model EQ-1 can work with Android Device only

3.1. Scanning screen

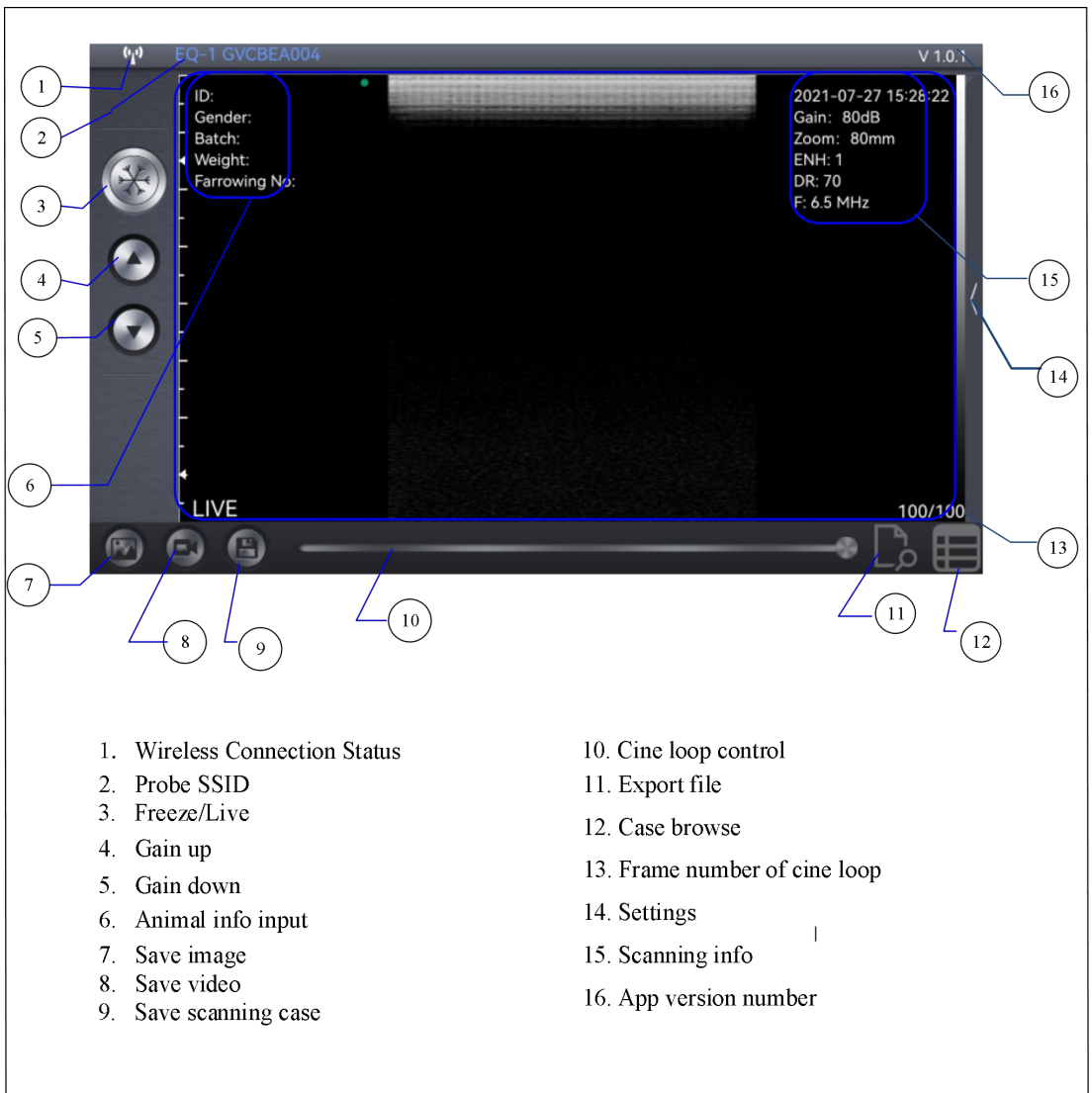


Figure 3-1 Main Screen

After the probe is connected, launch the App, the Main Screen will show similar in Figure 3-1. (No image is visible when the App is firstly launched.)

Attention: All the buttons on the main screen can be pressed when it is activated.

The Wireless Connection Status indicates the SSID of the Wi-Fi of the connected probe.

Key in animal info in part 6 by clicking the part, key in the ID number of animal, and it will be shown in part 15. See Figure 3-2

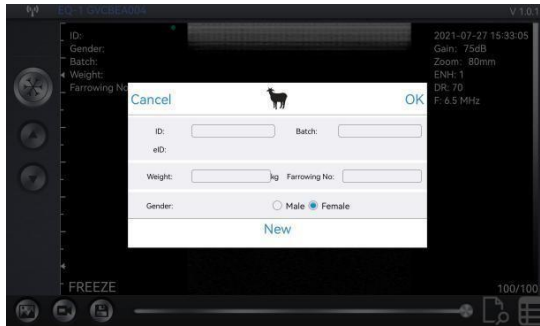


Figure 3-2 Animal info

Press the animal to choose the species of animal.

See Figure 3-3.

Press OK to start scanning.

Press New to start a new scanning.

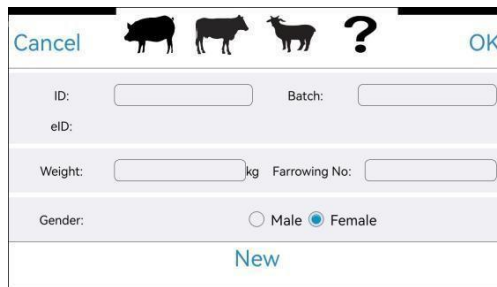


Figure 3-3 Animal Species

Attention: ID is necessary for any record or scanning.

Press the Run/Freeze Button 3 or the switch on the probe to fun the probe,to run or freeze the probe.

3.2. Settings

3.2.1 Scanning setting

Click button 14 in main screen to show the presetting window. See Figure 3-4.

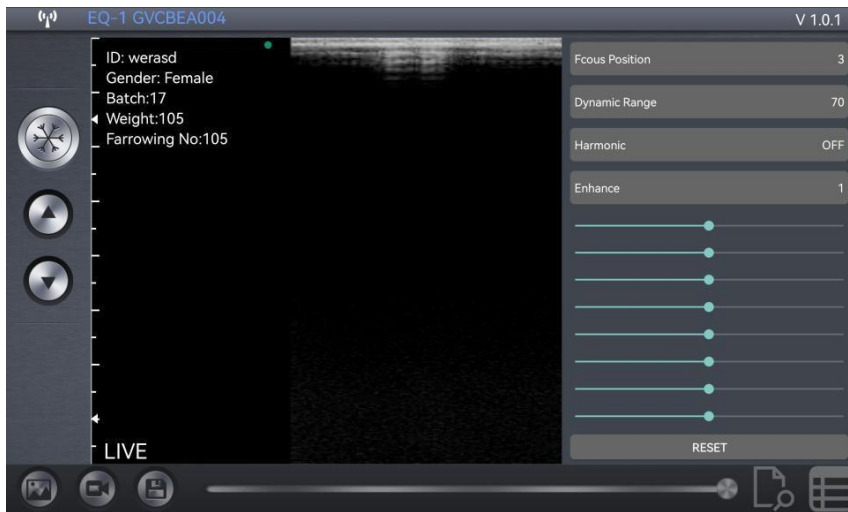


Figure3-4 Preset window

4 Focus Position is provided in this system, press the area, position number will change from 1 to 4, simultaneously the position moving point will change.

Dynamic Range can be adjusted from 40 to 110 by pressing the area.

Harmonic can be adjusted On/Off by pressing the area, frequency changes from 6.5MHz to 8MHz accordingly.

4 steps of image enhancement is provided in this system, press the area to change it from 1 to 4.

8TGC lines is provided in this system, each line can be moved by swiping left and right. See Figure3-4.

RESET is to set TGC to the default value.

When all is set, press any area of the screen to hide the setting window. All setting status will be shown in part 15 in the main screen.

3.2.1 Gain & depth setting

Run the probe by pressing Run/Freeze button or switch on the probe, press button 4 and 5 in main screen to adjust the gain from 30 to 105dB. Gain value is shown in part 15 of the main screen.

Run the probe, swipe the image area up and down of the main screen to adjust the scanning depth from 40 to 100mm, depth value is shown in part 15 of the main screen.

3.2.2 Channel setting

Channel 165 is default in the system. Normally it is not necessary to change the channel. In

any case need to be changed. Press part 2 the SSID area in main screen to show the setting window. Swipe up down to set the channel. See Figure 3-5.



Figure 3-5 Channel setting

3.3. Save image, video & case.

When image is showing in image area, press button 7 to save the current image to album, saved imaged can be browsed in the album of the mobile device.

Freeze the probe after 10 seconds scanning, a video(cine loop) of 100 frames will be generated automatically, number of frames will be shown in part 13 of the main screen. Swipe the cine loop bar button 10 left/right to move the frames between 1 and 100.

Press button 8 to save the video to album, saved video can be browsed in the album of the mobile device.

Press button 9 to save the case , pregnant status is required in this process, see Figure 3-6.

Press YES or NO to save the whole scanning case.



Figure 3-6 Pregnant status

All information like ID, EID, scanning time, and image is saved in this process. The saved information can be re-edit afterwards.

Attention: ID is required when save case.

400 cases can be saved, move saving case will cover the previous save ones.

3.4 Case review &re-edit.

Press button 12 to list the saved cases, all cases are listed up. See Figure 3-7.

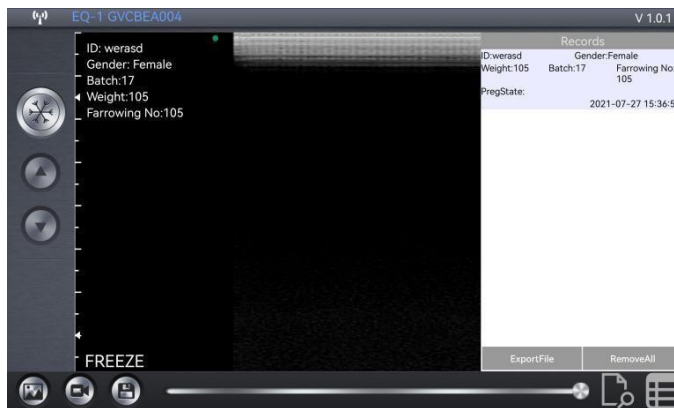


Figure 3-7 Case re-edit

Swipe the case to left, the edit buttons appears, press Edit to re-edit the case, and press delete to delete the case.

Press Remove All to delete all saved cases.

Section 4 Maintenance

4.1. Probe Charging

When battery is low, it is necessary to recharge the probe.

Pull the insertion at the end of the probe, and then connect the USB Charger and USB Cable with the probe to charge the probe as shown in the left picture of Figure 4-1.



Figure 4-1 Charge the Probe

When in charging, the battery indicator will be blinking and the grids indicate the capacity of the battery charged.

If four grids all light and the indicator not blinking means the battery is fully charged. Unplug the USB cable and the insertion should be carefully plugged to make the probe able to keep out water.

4.2. Waterproof of tablet

A waterproof bag is recommended to protect the tablet. Users can use it to protect the tablet when it is used in humid or dirty conditions.

4.3 Cleaning

Periodic cleaning of the probe and curve standoff is all that is usually required. The probe can be cleaned by soft cloth or paper. The probe with the waterproof level of IPX5 can be washed using clean water but users should NOT soak the probe in water. The standoff can be washed in the water, but should be protected from high temperature.

4.4 Storage

When not in use, it is recommended that the equipment should be put in the case. While stored the equipment should be protected from temperature extremes.